

Appln. No. 10/774,729  
Amendment dated September 7, 2005  
Reply to Office Action of June 7, 2005

## **REMARKS**

### **Allowable Claims**

In the Office Action mailed June 7, 2005, the Examiner initially indicated that claims 10 and 22 were objected to as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. By the present Amendment, claim 10 has been written in independent form to include all the subject matter of originally filed claim 1. Thus, independent claim 10 is believed to be in condition for allowance. Further, the subject matter of original claim 22 has been added to independent claim 15 such that independent claim 15 is now believed to be in condition for allowance. Claims 16-21 depend from amended independent claim 15 and are thus also believed to be in condition for allowance. Likewise, claims 11 and 12 have been amended to depend from allowable claim 10. Based upon these amendments, claims 10-12 and 15-21 are believed to be in condition for allowance.

### **§103(a) Rejections**

In the Office Action, claims 1-9 were rejected under 35 USC §103(a) as being unpatentable over the Cincotta U.S. Patent No. 6,361,025 taken together with the Smith U.S. Patent No. 4,474,477. Claims 15 and 16 were rejected under 35 USC §103(a) as being unpatentable over the Cincotta '025 patent taken together with the Suzuki U.S. Patent No. 6,860,718. Claims 11-14 and 17-21 were rejected under §103(a) as being unpatentable over the Cincotta '025 patent taken together with the Smith '477 and Suzuki '718 patents.

By the present Amendment, independent claim 1 has been amended to define over the combination of references cited by the Examiner in the Office Action. Based upon the following arguments for allowance and the foregoing claim amendments, independent claim 1 is believed to be allowable over the references cited by the Examiner. Reconsideration is respectfully requested.

By the present Amendment, claim 1 has been amended to indicate that the diffuser tube include both a first emitter section and a second emitter section that each include a plurality of steam diffusion holes. The steam-plug cover has been further defined to indicate that the steam-plug cover includes both a first open slot and a second open slot. A first seal member surrounds the first opening slot and a second seal member surrounds the second open slot. As described in amended independent claim 1, when the steam-plug cover is in its fully closed position, the first emitter section is positioned between a portion of the first seal member and a portion of the second seal member while the second emitter section is positioned between other portions of the first seal member and the second seal member. Thus, when the steam-plug cover is positioned in the fully closed position, the first and second seal members prevent the slurry of material being heated from flowing between the steam-plug cover and the diffuser tube.

In the Office Action, the Examiner cited the applicants prior U.S. Patent No. 6,361,025 in combination with the Smith '477 patent. The '025 patent teaches a similar steam ejection heater that includes a diffuser tube and a steam-plug cover. However, the '025 patent does not teach or suggest the use of any type of sealing member between the rotating diffuser tube and steam-plug cover. Thus, when steam pressure is not present, the flow of slurry material can pass between the diffuser tube and the cover and flow into the open interior. The applicant has addressed this problem by utilizing a seal member surrounding each of the open slots formed in the steam-plug.

Specifically, the first emitter section is positioned between the first seal member and the second seal member and the second emitter section is positioned between different portions of the first and second seal members when the steam-plug cover is in its fully closed position. The pair of seal members prevent the slurry from flowing into the open interior when the steam-plug cover is in the closed position. This feature of the invention is not shown or taught nor rendered obvious by either the Cincotta '025 patent or the Smith '477 patent, either alone or in combination.

Although the Smith '477 patent cited by the Examiner does teach the use of an O-ring seal between pressurized chambers, the reference does not teach the use of multiple seals positioned surrounding first and second open slots formed in a rotatable steam-plug cover, where the first and second seal members surround first and second emitter sections that each include a plurality of steam diffusion holes, as required by amended independent claim 1. If the teaching of the Smith '477 patent were combined with the Cincotta '025 patent, the combined reference would teach O-rings positioned at the top and bottom of the steam-plug cover to form a seal around the entire circumference of the steam-plug cover relative to the diffuser tube. Clearly, this is not what is claimed by amended claim 1 of the present application.

Based upon the amendments to claim 1, claim 1 is believed to be in condition for allowance and such action is respectfully requested.


Claims 3-5, 8-9 and 13-14 depend directly or indirectly from claim 1 and are thus believed to be allowable based upon the above comments.

**Conclusion**

Based upon the amendments to the claims and the above arguments, claims 1, 3-5 and 8-21 are believed to be in condition for allowance. The Examiner is invited to contact the applicants' undersigned attorney with any questions or comments, or to otherwise facilitate prosecute of the present application.

Respectfully submitted,

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